Dell PowerEdge VRTX WAN Optimization with Silver Peak

Overview

As users become more distributed, and application requirements more diverse, delivering IT services to branch and remote offices becomes increasingly difficult. Dell™ PowerEdge™ VRTX addresses this challenge by converging servers, storage and networking functionality into a single, office-optimized chassis. Integrated, pretested and certified, VRTX delivers a complete technology platform that users can deploy smoothly and operate confidently, bringing unprecedented simplicity, efficiency and versatility to any office environment.

A challenge remains, however, when users in remote and branch offices need to communicate with one another, to centralized data centers, and to cloud services over a Wide Area Network (WAN). Limited WAN bandwidth, latency due to distance, and poor network quality can hurt employee productivity in these environments, and jeopardize strategic initiatives like offsite data replication.

Dell has partnered with Silver Peak to address this WAN challenge.

The Silver Peak Solution

The Silver Peak Solution uses real-time optimization techniques to overcome networking issues that are common to most WANs. Silver Peak's technology is built on the company's Virtual Acceleration Open Architecture (VXOA) and includes the following core components:

- **Network Memory™**: Silver Peak's patented solution for disk based WAN deduplication eliminates the transfer of repetitive data over the WAN. This improves bandwidth utilization, lowers bandwidth costs, and maximizes application performance.

- **Network Integrity**: Silver Peak employs a variety of real-time techniques to address packet delivery issues common to shared WAN technologies, such as MPLS, Internet VPNs, and cloud. In addition, Silver Peak uses advanced Quality of Service and traffic-shaping techniques to prioritize real-time applications and guarantee available network resources.

- **Network Acceleration**: Silver Peak mitigates the impacts of latency due to distance by using various TCP acceleration techniques, like adjustable window sizing and selective acknowledgements, as well as CIFS acceleration techniques, such as read-aheads and write-behinds.

Use Case: LAN-like Performance across a Distributed Enterprise

To provide the distributed enterprise with a seamless user experience regardless of location, Dell and Silver Peak extend local area network (LAN) responsiveness to remote offices. By accelerating reliable access to centralized applications and data, enterprises can enjoy the cost and management benefits of server/storage centralization without diminishing the remote end-user experience. Enable your network and empower users across your distributed enterprise to work more efficiently and effectively.
Deploying Silver Peak with the PowerEdge VRTX solution

Silver Peak offers a specially priced and packaged VX virtual appliance designed specifically for the PowerEdge VRTX. The software is installed on the VRTX hypervisor, delivering all VXOA capabilities: Network Memory, Network Integrity, and Network Acceleration. The Silver Peak solution for VRTX supports up to 20Mbps WAN capacity. For traditional branch office applications like email, Web, and Microsoft Sharepoint, that means a 20Mbps WAN will look like a 100-200Mbps connection. For storage backup and replication, this implies that approximately 60GB per hour of traffic can be replicated over that same network.

Silver Peak VX virtual appliances are required on all ends of a WAN connection as illustrated in the sample multisite VRTX deployment shown in Figure 2 below.

Benefits of the Joint Solution

**Easy to Deploy and Manage** — Silver Peak’s virtual appliances enable customers, partners, and service providers to deploy WAN optimization more conveniently than ever, deployed as software instances on Dell’s PowerEdge VRTX platform.

**Minimizes IT Costs** — The Dell/Silver Peak combined solution enables you to get the most out of your existing network infrastructure. With up to 85% improvement in effective bandwidth, you can avoid or delay costly bandwidth upgrades. Additionally, you can run voice, video and data over cost-effective shared networks, like MPLS, Internet VPNs, and clouds.

**Scalable and Future Proof** — Dell and Silver Peak offer a highly scalable solution that grows with your WAN requirements, from Mbps to multi-Gbps of WAN capacity. By optimizing all IP traffic, it is designed for any application, today or tomorrow.

Dell PowerEdge VRTX brings the capabilities of your data center into your branch office. With Silver Peak in the mix, communication between VRTX devices is fast, reliable and secure over any WAN.

For a free 30-day trial, visit silver-peak.com/vrtx or contact your local Dell or Silver Peak representative.